

REMARKS

Claims 1-4 are currently pending in the above referenced application. The specification of the above referenced application is objected to due to various informalities. Likewise the drawings are also objected to due to incorrect format and failing to facilitate an understanding of the invention.

Applicants respectfully submit the attached **Substitute specification** to correct the informalities objected to by the office in their Official Action of March 17, 2003. In addition, applicants respectfully submit the attached new drawings 1-5 to satisfy the Office's requirement for new drawings. No new matter is contained therein.

The Office rejects claim 1-4 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 5,168,262 issued to *Okayama*, hereafter referred to as *Okayama*, in view of U.S. Patent 5,691,703 issued to Roby et al., hereafter referred to as *Roby*. Applicants respectfully traverse.

The Office reads *Okayama* as disclosing a multi criteria fire detection system comprising: a plurality of sensors (a plurality of fire detectors), a processor including a probabilistic neural network comprising a nonlinear algorithm that defines a probabilistic density function for a plurality of data sets that provides a decisional output regarding the presence of fire or non-fire events. The Office concedes that *Okayama* does not disclose a non parametric pattern recognition system, nor disclose employing an optimized kernel width parameter, nor using baseline, fire and nuisance data sets.

The Office reads *Roby* as disclosing the use of non-fire and fire data sets, and concludes that the combination of *Okayama* and *Roby* anticipate claims 1-4 of the instant application rendering those claims unpatentable over 35 U.S.C. § 103(a).

Although the suggested combination of *Okayama* and *Roby* fails to disclose or teach the use of a non parametric pattern recognition system, or employing an optimized kernel width parameter, the office supports its rejection of claims 1-4 by simply concluding that these features are just obvious additions to *Okayama*. The Office's rejection is completely silent regarding how and where the baseline data set featured in claims 1-4 is disclosed in the proposed combination.

Applicants respectfully traverse.

Okayama discloses a multi criteria fire detection system comprising a plurality of sensors as well as a processor that employs a probabilistic neural network. However, applicants respectfully submit that *Okayama* does not teach or fairly suggest is the use of fire, nuisance and baseline data sets. As such *Okayama* necessarily fails to teach or fairly suggest the use of a single optimized kernel width parameter to help define the fire, nuisance and baseline data sets.

In addition, applicants respectfully submit that the Office's naked contention that the use of an single optimized kernel width parameter for several data sets processed with a PNN algorithm as disclosed in claims 1-4 does not involve an inventive step, and is therefore obvious in view of the primary reference in a 103 rejection because the primary reference states that data can be filtered, simply does not meet the standard for obviousness as defined in 35 U.S.C. § 103(a). As such the Applicants respectfully

request that the Office reconsider and withdraw its rejection of claims 1-4 under 35 U.S.C. § 103(a).

Applicants respectfully further submit that *Roby* discloses the use of a fire data set and a nuisance data set. *Roby* **does not** disclose nor provide a teaching or fair suggestion of the use of a baseline data set as claimed and disclosed in the instant application and thus does not support the Office's rejection of claims 1-4. As such *Roby* cannot support the proposed combination and subsequent rejection of claims 1-4 under 35 U.S.C. § 103(a). Therefore, Applicants respectfully request that the Office reconsider and withdraw its rejection of claims 1-4 under 35 U.S.C. § 103(a).


In addition to the failure of the proposed combination to disclose each feature of the claims 1-4, the Office provides no teaching or suggestion in either of the applied reference which would motivate the skilled artisan to make the proposed combination.

In view of the above distinctions Applicants respectfully submit that claims 1-4 of the above referenced application are patentable over any combination of *Okayama* and *Roby*. As such Applicants respectfully request that the Office reconsider and withdraw its rejection of claim 1-4 under 35 U.S.C. § 103(a).

There being no other outstanding issues of patentability, this application appears to be in condition for allowance, indication of which is kindly solicited.

Should the Office feel that any issues remain outstanding it is requested that the undersigned be contacted so that any such issues may be adequately addressed by way of supplemental amendment or Examiner's amendment.

Respectfully Submitted,



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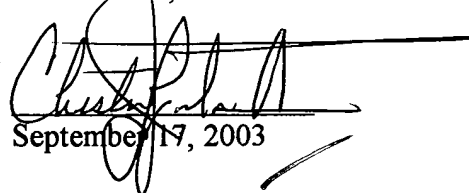
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CERTIFICATE OF FIRST CLASS MAILING

I hereby certify that this correspondence [Amendment including a Substitute Specification and Drawings, a Transmittal Letter and a Petition for an Extension of Time -- 24 pages total] is being placed in the possession of the US Postal Service mail for delivery the United States Patent and Trademark Office, with sufficient postage for First class mail on the date shown below.

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